IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Lihui Zhang *et al.*

Application No.: 10/676,409

Filed: October 1, 2003

For: DETERMINATION OF BEST
    TRANSPORTATION GUIDELINES

Examiner: Iwarere, Oluseye

Group Art Unit: 3687

Confirmation No.: 8065

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APPEAL BRIEF

Sir:

The Appellants submit the following Appeal Brief pursuant to 37 C.F.R. § 41.37(c) for consideration by the Board of Patent Appeals and Interferences. The Appellants authorize the amount of $540.00 to cover the cost of filing the opening brief as required by 37 C.F.R. § 1.17(f) to be charged to Deposit Account No. 02-2666.

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I.   REAL PARTY IN INTEREST

Lihui Zhang and Christian R.W. Butzlaff, the parties named in the caption, transferred their rights to the subject Application through an assignment recorded on October 1, 2003 (Reel/Frame 014574/0079) in the patent application to SAP Aktiengesellschaft (AG), of Walldorf, Germany. Thus, as the owner at the time the brief is being filed, SAP AG is the real party in interest.

II.   RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, be directly affected by or have a bearing on the Board's decision in this Appeal.

III.   STATUS OF CLAIMS

Claims 1-19 are currently pending and rejected in the Application. The Appellants respectfully appeal the rejections of claims 1-19.

IV.   STATUS OF AMENDMENTS

No amendments were submitted after the Final Office Action mailed on May 12, 2009.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 1 recites an apparatus comprising: a demand order module to receive an order for a set of products to be shipped to a target location (*See* pg. 7, lines 26-30; Figure 2, element 205); a transportation guideline module including a set of constraints for a shipment from one of a set of a source locations to the target location (*See* pg. 8, lines 8-19; Figure 2, element 207); a route determination module to select at least one

source location from the set of source locations having the set of products when the order for the set of products is fulfilled based on a cost factor and a utilization of a capacity of a set of transports (*See* pg. 8, lines 25-31; Figure 2, element 235); and a processing device to execute the route determination module (*See* pg. 10, lines 1-6; Figure 2, element 215).

Claim 4 recites a method comprising: identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is fulfilled (*See* pg. 11, lines 22-31; Figure 4, element 405); prioritizing a set of shipping rule groups based on a cost factor associated with the set of source locations and the target location (*See* pg. 12, lines 1-9; Figure 4, element 407); and selecting a subset of the set of source locations and a subset of the shipping rule groups based on the cost factor and a utilization of a capacity of a set of transports (*See* pg. 13, lines 5-15; Figure 4, element 415).

Claim 10 recites an apparatus comprising: a means for determining a set of source locations having a set of resources when an order for the set of resources is fulfilled (*See* pg. 11, lines 22-31; Figure 4, element 405); a means for ordering a set of shipping rule groups based on a cost of shipping to a target location from the set of source locations (*See* pg. 12, lines 1-9; Figure 4, element 407); and a means for selecting a subset of the set of shipping rule groups and a subset of the set of source locations based on the cost of shipping the set of resources from the subset of the set of source locations to the target location and utilization of a set of transports (*See* pg. 13, lines 5-15; Figure 4, element 415).

Claim 14 recites a machine readable medium containing therein a set of instructions which when executed cause a machine to perform a set of operations comprising: identifying a set of source locations having a set of products for a target

location when an order for the set of products is fulfilled (*See* pg. 11, lines 22-31; Figure 4, element 405); prioritizing a set of order guidelines based on a cost factor for shipping the set of products from the set of source locations to the target location (*See* pg. 12, lines 1-9; Figure 4, element 407); and determining a subset of the set of order guidelines and a subset of the set of source locations based on the cost factor and utilization of a capacity of a set of transports (*See* pg. 13, lines 5-15; Figure 4, element 415).

Claim 16 recites the machine readable medium of claim 14, wherein the set of order guidelines includes a default order guideline (*See* pg. 13, lines 26-31).

Claim 18 recites the machine readable medium of claim 16, wherein no product of the set of products is associated with more than one default order guideline (*See* pg. 13, lines 26-31).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues involved in this Appeal are as follows:

A.   Whether claims 1, 2, 4, 5, 7-10, 13-16, 18, and 19 are obvious under 35 U.S.C. § 103(a) based on Arunapuram *et al.* (U.S. 2002/0019759) ("Arunapuram") and Morimoto *et al.* (U.S. 7,035,856) ("Morimoto").

B.   Whether claims 3, 6, 11, and 17 are obvious under 35 U.S.C. § 103(a) based on Arunapuram and Cappellini *et al.* (U.S. 2003/0014286) ("Cappellini").

All of the claims do not stand or fall together. The basis for the separate patentability of the claims is set forth below.

VII.   ARGUMENT

A.   Rejection of Claims 1, 2, 4, 5, 7-10, 13-16, 18, and 19 Under 35 U.S.C. § 103(a) based on Arunapuram and Morimoto

Claims 1, 2, 4, 5, 7-10, 13-16, 18, and 19 are rejected under 35 U.S.C. § 103(a) as being obvious over Arunapuram *et al.* (U.S. 2002/0019759) ("Arunapuram"), in view of Morimoto (U.S. 7,035,856). The Appellants respectfully request that these rejections be reversed for at least the following reason. Arunapuram and Morimoto, alone or in combination, do not teach or suggest all the claim limitations expressly, impliedly, or obviously.

> To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). *See* M.P.E.P. § 706.02(j).

1.   Independent Claims 1, 4, 10, and 14; Dependent Claims 2, 5, 7-9, 12, 13, 15, and 19

a) Independent claims 1, 4, 10, and 14 and dependent claims 2, 5, 7-9, 12, 13, 15, and 19 are not obvious at least because Arunapuram and Morimoto do not disclose selecting a source location from a set of source locations having the set of products

Independent claims 1, 4, 10, and 14 recite "a route determination module to *select* at least one source location *from the set of source locations having the set of products* when the order for the set of products is fulfilled" (emphasis added) or

analogous aspects. The Examiner concedes that Arunapuram does not teach these aspects, but contends that Morimoto teaches these aspects, stating that the Abstract of Morimoto "discusses determining a route from a subset of source locations" (*See* Final Office Action mailed May 12, 2009, pg. 3). The Examiner states that the regional shipping companies equate to a set of source locations.

> However, in the abstract of Morimoto, it states, "A server is configured to send out requests for quotes to a number of regional shipping companies using a network. The server receives responses from the network and selects a route based on the responses." The "number of regional shipping companies" is construed as "the set of source locations" in the claim. Each regional shipping company is construed as a separate "source location". [*sic*] These routes are selected based on the regional shipping company which is believed to have distinct locations from one another.

See Final Office Action mailed May 12, 2009, Response to Arguments, pg. 16. The Examiner does not address all the characteristics of the source locations recited in the independent claims, including the aspect that the source locations, from which a selection is made, have the products. The regional shipping companies of Morimoto do not equate to "source locations having the set of products" (*See* independent claims 1, 4, 10, and 14) because the regional shipping companies do not have the products to be shipped. The regional shipping companies provide quotes based on information received from a requestor, such as origination, destination, weight, and any special shipping requirements (*See* Morimoto, col. 10, ll. 22-28). Accordingly, the regional shipping companies have **information** about the product, but they do not have the **products** themselves. The **requestor** who requests quotes from regional shipping companies has the products to be shipped (*See Id.* at Figure 5, item 100 and col. 10, ll. 11-13, the company requesting quotes "receives [the] package to be shipped"). Thus,

Morimoto does not teach or suggest "a route determination module to select at least one source location from *the set of source locations having the set of products when the order for the set of products is fulfilled*" (*See* independent claims 1, 4, 10, and 14, emphasis added).

Each of claims 2, 5, 7-9, 12, 13, 15, and 19 depends from one of independent claims 1, 4, 10, and 14, and thus incorporates the respective limitations thereof. For at least the above reasons relating to the independent claims, Arunapuram and Morimoto do not teach or suggest all the claim limitations of these dependent claims. Accordingly, it is respectfully requested that these rejections be reversed.

2. Claim 16

a) Claim 16 depends from patentable base claim 14

Claim 16 depends from independent claim 14 and thus incorporates the limitations thereof. For at least the above reasons regarding independent claim 14, Arunapuram and Morimoto do not teach or suggest all the limitations of this dependent claim. Thus, the Appellants respectfully request that this rejection be reversed. Further, the Appellants believe that this claim is separately patentable for the reasons below.

b) Claim 16 is not obvious at least because Arunapuram and Morimoto do not disclose a default order guideline

Claim 16 recites "the set of order guidelines includes a default order guideline." The Examiner asserts that Arunapuram discloses this aspect on page 18, col. 2, ll. 43-46, which states "wherein said status updates are used to automatically update records contained in an order database, said database being accessible by customers, carriers, and locations to review the status of select orders" (*See* Final Office Action mailed May 12, 2009, pg. 10). The Appellants respectfully disagree with the Examiner's assertion.

Arunapuram is silent regarding a default order guideline. In the above-noted

passage, Arunapuram states that the status of an order is updated in an order database so that "customers, carriers, and locations" can review the status of an order (*See* Arunapuram, page 18, col. 2, ll. 43-46). One example of an order status is designating an order as new (*See Id.* at paragraph 0099). The Examiner does not indicate and the Appellants do not discern how updating an order status equates to a default, much less a default order guideline. Accordingly, Arunapuram does not teach or suggest "the set of order guidelines includes a default order guideline" (*See* claim 16).

The Examiner does not indicate and the Appellants do not discern any part of Morimoto that cures the aforementioned deficiencies of Arunapuram. Therefore, Arunapuram and Morimoto do not teach or suggest all the limitations of claim 16. The Appellants respectfully request that the Board overturn this rejection.

3. Claim 18

a) Claim 18 depends from patentable claims 16 and 14

Claim 18 depends from claim 16, which depends from independent claim 14 and thus incorporates the limitations thereof. For at least the above reasons regarding claim 16 and independent claim 14, Arunapuram and Morimoto do not teach or suggest all the limitations of this dependent claim. Thus, the Appellants respectfully request that this rejection be reversed. Further, the Appellants believe that this claim is separately patentable for the reasons below.

b) Claim 18 is not obvious at least because Arunapuram and Morimoto do not disclose no more than one default order guideline for a product

Claim 18 recites "no product of the set of products is associated with more than one default order guideline." The Examiner asserts that Arunapuram discloses this aspect in paragraph 0038, "orders received through the order interface 306 have a single origin/destination pair" (*See* Final Office Action mailed May 12, 2009, pg. 11). The

Appellants respectfully disagree with the Examiner's assertion.

Arunapuram does not disclose an association of products with default order guidelines. The above sentence of Arunapuram states that an order has one origin and one destination. Arunapuram does not indicate that the origin and destination comprise any type of default. By contrast, it is presumed that the origin and destination locations are specific to their respective orders and therefore are not established by default. Since Arunapuram does not involve default order guidelines, it follows that Arunapuram does not teach or suggest the limitation that "no product of the set of products is associated with more than one default order guideline" (*See* claim 18).

The Examiner does not indicate and the Appellants do not discern any part of Morimoto that cures the aforementioned deficiencies of Arunapuram. Therefore, Arunapuram and Morimoto do not teach or suggest all the limitations of claim 18. The Appellants respectfully request that the Board overturn this rejection.

B. **Rejection of Claims 3, 6, 11, and 17 Under 35 U.S.C. § 103(a) based on Arunapuram and Cappellini**

1.   **Claims 3, 6, 11, and 17**

Claims 3, 6, 11, and 17 are rejected under 35 U.S.C. § 103(a) as being obvious over Arunapuram, in view of Cappellini (U.S. 2003/0014286). Claims 3, 6, 11, and 17 depend from independent claims 1, 4, 10, and 14, respectively, and thus incorporate the limitations thereof. Since the independent claims were rejected under Arunapuram and Morimoto, the Appellants assume that the Examiner intended to reject dependent claims 3, 6, 11, and 17 under Arunapuram, Morimoto, and Cappellini, rather than Arunapuram and Cappellini. The Examiner does not indicate and the Appellants do not discern any part of Cappellini that cures the aforementioned deficiencies of Arunapuram and Morimoto regarding the independent claims. For at least the above

reasons regarding the independent claims, Arunapuram, Morimoto, and Cappellini, alone or in combination, do not teach or suggest all the limitations of claims 3, 6, 11, and 17. Reconsideration and reversal of these rejections are respectfully requested.

In view of the foregoing, the Appellants respectfully request that the Board overturn the rejections of claims 1-19.

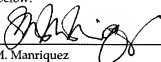Respectfully submitted,

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CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being submitted to the United States Patent and Trademark Office electronically via EFS Web on the date shown below.

_____   _____
Susan M. Manriquez   8/12/2009

VIII. CLAIMS APPENDIX

1.   (Previously Presented) An apparatus comprising:

a demand order module to receive an order for a set of products to be shipped to a target location;

a transportation guideline module including a set of constraints for a shipment from one of a set of a source locations to the target location;

a route determination module to select at least one source location from the set of source locations having the set of products when the order for the set of products is fulfilled based on a cost factor and a utilization of a capacity of a set of transports; and

a processing device to execute the route determination module.

2.   (Previously Presented) The apparatus of claim 1, further comprising:

a storage device to store at least one of the demand order module, the transportation guideline module, and the route determination module.

3.   (Original) The apparatus of claim 1, further comprising:

a loading module to simulate a loading of the shipment of the set of products into the set of transports.

4.   (Previously Presented) A method comprising:

identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is fulfilled;

prioritizing a set of shipping rule groups based on a cost factor associated with the set of source locations and the target location; and

selecting a subset of the set of source locations and a subset of the shipping rule groups based on the cost factor and a utilization of a capacity of a set of transports.

5.   (Original) The method of claim 4, wherein selecting comprises:

searching iteratively through the set of shipping rule groups in order of priority for a shipping solution.

6.   (Original) The method of claim 4, wherein selecting comprises: simulating iteratively the fulfillment of each group of the set of shipping rules in priority order until the set of desired resources is loaded into the set of transportation units.

7.   (Original) The method of claim 4, wherein the set of shipping rule groups includes a default group of shipping rules.

8.   (Original) The method of claim 4, wherein the utilization of the capacity of the set of transports is a maximum utilization.

9.   (Original) The method of claim 4, further comprising:

altering a size of a shipment to utilize a maximum capacity of the set of transports.

10.   (Previously Presented) An apparatus comprising:

a means for determining a set of source locations having a set of resources when an order for the set of resources is fulfilled;

a means for ordering a set of shipping rule groups based on a cost of shipping to a target location from the set of source locations; and

a means for selecting a subset of the set of shipping rule groups and a subset of the set of source locations based on the cost of shipping the set of resources from the subset of the set of source locations to the target location and utilization of a set of transports.

11.   (Original) The apparatus of claim 10, further comprising:

a means for simulating the loading of the set of transports.

12.   (Original) The apparatus of claim 10, wherein the set of shipping rule groups includes a default shipping rule group.

13.   (Original) The apparatus of claim 10, further comprising:

a means for determining all source locations having the set of resources.

14.   (Previously Presented) A machine readable medium containing therein a set of instructions which when executed cause a machine to perform a set of operations comprising:

identifying a set of source locations having a set of products for a target location when an order for the set of products is fulfilled;

prioritizing a set of order guidelines based on a cost factor for shipping the set of products from the set of source locations to the target location; and

determining a subset of the set of order guidelines and a subset of the set of source locations based on the cost factor and utilization of a capacity of a set of transports.

15. (Original) The machine readable medium of claim 14, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising:

searching iteratively through the set of order guidelines in order of priority for a shipping solution.

16. (Original) The machine readable medium of claim 14, wherein the set of order guidelines includes a default order guideline.

17. (Original) The machine readable medium of claim 14, wherein determining comprises:

simulating iteratively the fulfillment of each order guideline from the set of order guidelines in priority order until the set of resources is loaded into the set of transports.

18.   (Original) The machine readable medium of claim 16, wherein no product of the set of products is associated with more than one default order guideline.

19.   (Previously Presented) The machine readable medium of claim 14, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising:

altering a size of a shipment to utilize a maximum capacity of the set of transports.

IX.   **EVIDENCE APPENDIX**

No evidence is submitted with this appeal.

X.   **RELATED PROCEEDINGS APPENDIX**

No related proceedings exist.